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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/678,183 | 10/06/2003 | David Joseph Kropaczek | 24GA5999 | 2333 |

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| EXAMINER | |
|---|---|
| PHAN, THAI Q | |

| ART UNIT | PAPER NUMBER |
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| 2128 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/678,183 | KROPACZEK ET AL. | |
| | Examiner | Art Unit | |
| | Thai Phan | 2128 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *25 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-8,10,11 and 13-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7, 10, 11, and 13-16* is/are rejected.

7)☒ Claim(s) *8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

This Office Action is in response to applicants' amendment filed on Feb. 25, 2008. Claims 1-8, 10, 11, and 13-16 are pending in the Action.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 recites the limitation "the bundle group amount" in selectively setting a symmetry associated step. There is insufficient antecedent basis for this limitation in the claim.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1- 4, 6-7, 10, 11 and 13-16 are rejected under 35 U.S.C. 102(e) as being anticipated by anticipated by Kropaczek et al, US patent no. 7,200,541.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As per claim 1, Kropaczek anticipates a method for creating a nuclear reactor core design with template (Figs. 9-11, graphical representation to show how data stored in structure or a template for displaying, viewing, etc) for storing design data or fuel bundle data with feature limitations very identical to the claimed invention, comprising: selectively assigning, using a graphical user interface providing a graphical representation of a nuclear reactor core (col. 3, lines 9-23, cols. 4-5, col. 15, lines 13-22), fuel bundle categories to fuel bundle positions in the graphical representation (col. 13, line 52 to col. 14, line 5) to create a structure or template as shown in Figs. 11-13, having fuel core data and constraints (col. 12, lines 5-16, lines 57-65) that only a fuel bundle matching the assigned fuel bundle categories to the fuel bundle location or positions be allowed to be loaded in the fuel bundle position (col. 14, line 54 to col. 15, line 29, col. 16, lines 38-56).

As per claim 2, Kropaczek anticipates the method of claim 1, wherein the fuel bundle categories include fresh and locked, the fresh category indicating to insert an unexposed fuel bundle, the locked category indicating that a fuel bundle Currently occupying an associated fuel bundle position in an actual nuclear reactor core remains in that position in creating a new nuclear reactor core loading map (col. 16, lines 38-56).

As per claim 3, Kropaczek anticipates the method of claim 2, wherein the fuel

bundle categories further include reinserted, the reinserted category indicates to insert a fuel bundle that has been exposed (col. 8, lines 23-40).

As per claim 4, the method of claim 1, wherein the selectively assigning step includes setting a bundle group amount for a selected one of the fuel bundle categories, and selectively assigning the set bundle group amount of the selected fuel bundle category (col. 16, lines 4-26).

As per claim 6, The method of claim 1, wherein at least one category is fresh, the fresh category indicating to insert an unexposed fuel bundle; and the selectively assigning step includes assigning a type designation to the fuel bundle positions assigned the fresh fuel bundle category (col. 3, lines 25-40, col. 7, lines 36-50).

As per claim 7, Kropaczek anticipates the method of claim 1, wherein at least one category is reinserted fuel bundles, the reinserted category indicates to insert a fuel bundle that has been exposed; and the selectively assigning step including manually assigning a priority to each of the fuel bundle positions assigned the reinserted category, the priority indicating an order for loading exposed fuel bundles based on an attribute of the exposed fuel bundles (col. 15, lines 44-61).

As per claim 10, Kropaczek anticipates the step of creating the template comprises editing an existing nuclear reactor core template by changing a fuel bundle category assigned to at least one fuel bundle position in the template (Figs. 12-13) having as constraints (col. 12, lines 5-16) that only a fuel bundle matching the assigned fuel bundle categories to the fuel bundle location or positions be allowed to be loaded in the fuel bundle position (col. 14, line 54 to col. 15, line 29, col. 16, lines 38-56).

As per claim 11, Kropaczek anticipates the method of claim 10, wherein the fuel bundle categories include at least one of fresh, locked and reinserted, the fresh category indicating to insert an unexposed fuel bundle, the locked category indicating that a fuel bundle currently occupying an associated fuel bundle position in an actual nuclear reactor core remains in that position in creating a new nuclear reactor core loading map, and the reinserted category indicates to insert a fuel bundle that has been exposed (Fig. 12, col. 13, line 53 to col. 15, line 12, col. 16, lines 40-55).

As per claim 13, the method of claim 10, wherein creating the existing nuclear reactor core template step comprises: accessing a database of templates; and selecting one of the templates for editing (Fig. 3, col. 5, lines 27-64).

As per claim 14, Kropaczek anticipates the method of claim 1, wherein the step of creating the template comprises: deriving a loading template from a loading map of a selected cycle of nuclear reactor based on the user input parameters (Figs. 11, cols. 12-13).

As per claim 15, Kropaczek anticipates the method of claim 14, wherein the deriving step derives the loading template from the loading map of the selected cycle of the nuclear reactor and the loading map of a cycle previous to the selected cycle (cols. 12-14).

As per claim 16, Kropaczek anticipates an apparatus for creating a nuclear reactor core template comprising:

a graphical user interface; and a processor controlling the graphical user interface (Fig. 9, col. 7, lines 26-35) to display a graphical representation of a nuclear

reactor core, and to provide a user with graphical tools for at least one of assigning fuel bundle categories to fuel bundle positions in the graphical representation and editing assigned fuel bundle categories to the fuel bundle positions in the graphical representation to create a template (cols. 7-9, Figs. 11) having as constraints that only a fuel bundle matching the assigned fuel bundle categories to the fuel bundle positions be allowed to be loaded in the fuel bundle position (col. 12, lines 5-16, col. 14, line 54 to col. 15, line 29, col. 16, lines 38-56).

### *Response to Arguments*

Applicant's arguments filed Feb. 25, 2008 have been fully considered but they are not persuasive.

In response to applicants' argument US patent no.7,200,541 fails to disclose or address the creation of a core template to store fuel core data, the examiner disagrees. Kropaczek discloses in Figs 10, 11, and 12 a structure for showing, viewing, displaying or storing fuel core data in a two dimension of a cross section of loading fuel core (col. 12, lines 57-65). Such data structure to store data for displaying, viewing and/or storing is a data template as known in the art.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Phan whose telephone number is 571-272-3783. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 08, 2008

/Thai Phan/
Primary Examiner, Art Unit 2128